What is claimed is:

1. A flared end structure of a metal tube to be pressed against a seat formed in a member by tightening a coupling nut to the member, said flared end structure having a joining end part to be pressed against the seat of the member, and a curved part continuous with the joining end part;

wherein the curved part has a curved outer surface and a concave inner surface having a bottom edge, and

the curved outer surface has a radius R of curvature smaller than a wall thickness **t** of the metal tube.

2. A flared end structure of a metal tube to be pressed against a seat formed in a member by tightening a coupling nut to the member having a joining end part to be pressed against the seat of the member, and a curved part continuous with the joining end part;

wherein the curved part has a curved outer surface and a concave inner surface having a bottom edge, and

the curved outer surface has a center of curvature at a position on the radially outer side of the bottom edge of the concave inner surface.

3. The flared end structure of a metal tube according to claim 1 or 2, wherein the curved outer surface merges into a flat surface, on which the coupling nut exert pressure, of a neck part, and the bottom edge of the concave inner surface is in a radial range corresponding to the flat surface of the neck part.

4. The flared end structure of a metal tube according to claim 3, wherein the flat surface of the neck part is perpendicular to the axis of the tube.

5. The flared end structure of a metal tube according to claim 3, wherein the flat surface of the neck part is connected to the outer surface of the metal tube by a curved connecting surface having a center of curvature at a position radially outside the metal tube, and the flat surface extends between the curved surface of the curved part and the curved connecting surface.

6. The flared end structure of a metal tube according to

claim 1 or 2, wherein the radius R of curvature and the wall thickness **t** of the metal tube meet an inequality:

$$0.8t < R < t.$$

7.   A flared end structure of a metal tube to be pressed against a seat formed in a member by tightening a coupling nut to the member having a joining end part to be pressed against the seat of the member, and a curved part continuous with the joining end part;

wherein the curved part has an curved outer surface and a concave inner surface having a bottom edge, and

the curved outer surface merges into a flat surface, which the coupling nut exerts pressure, of a neck part,

the flat surface of the neck part is connected to an outer surface of the metal tube by a curved connecting surface having a center of curvature at a position radially outside the metal tube, and

a distance including a tolerance between the flat surface of the neck part and the end of the joining end part of the metal tube meets an inequality:

$$L1 \leq L \leq L2$$

where

$$L1 = \{(D1 - D3)/2 + r\}/\tan(\alpha/2) + t/\sin(\alpha/2) + t$$
$$L2 = \{(D2 - D3)/2 - t\}/\tan(\alpha/2) + t/\sin(\alpha/2) + t$$

D1: Outside diameter of the metal tube

D2: Outside diameter of the flared end structure

D3: Inside diameter of the end of the flared end structure

r: Radius of curvature of the curved connecting surface

α: Cone angle of a cone containing the joining end part

t: Wall thickness of the tube.

8.   The flared end structure of a metal tube according to claim 7, wherein the flat surface of the neck part extends between the curved outer surface and the curved connecting surface.

9.   The flared end structure of a metal tube according to any one of claims 1 to 8, wherein the tube has an outside diameter not smaller than 6 mm.